Switzerland versus World or AMIS Plus versus GRACE

D. Radovanovic, S. Windecker, P. Urban, O. Bertel, F. Eberli, M. Maggiorini, G. Pedrazzini, P-F. Keller, H. Rickli, J-C. Stauffer, F. Gutzwiller, P. Erne AMIS Plus Investigators

Background: GRACE is a worldwide prospective multinational study of patients hospitalized with acute coronary syndromes (ACS). AMIS Plus is a nationwide prospective multicenter study of ACS patients hospitalized in Switzerland.
Aim: To examine if there are differences in characteristics, treatment and outcomes between ACS patients enrolled in GRACE *(Am. Heart J 2009; 158 (2):193-201)* and in AMIS.
Methods: Comparison of GRACE and AMIS results.
Results: From 2001-2007, a total 31,982 patients from 184 hospitals in 25 countries were enrolled in GRACE and 19,430 ACS patients from 67 hospitals were enrolled in AMIS. In GRACE, less patients had STEMI, 9557 (35%) vs. 10,940 (56%) in AMIS, but more frequently UA (26% vs. 6%; p<0.001). The number of NSTEMI patients was comparable (36% vs. 38%). AMIS ACS patients were older 66y (IQR 55-75y) vs. 65y (IQR 56-76y); less frequently female (28% vs. 33%), less diabetic (19% vs. 26%), had more often hyperlipidemia (59% vs. 42%), and more current or former smokers (65% vs. 47%). Of the GRACE patients, 24,447 (81%) presented with Killip class I compared with 15,163 (78%) AMIS patients. Medical therapy at admission was comparable with a modest increase in the use of aspirin, beta-blockers and ACE inhibitors/ARBs over time but a dramatic increase of clopidogrel use (in AMIS 30% to 80%). AMIS Plus STEMI patients underwent more frequently reperfusion (thrombolysis and percutaneous coron ary intervention; PCI) compared with GRACE patients (74% vs. 68%). Interventions followed rapidly in Switzerland: door-to-needle time for thrombolysis was within 30 minutes of hospital presentation for 42% of the 1738 GRACE STEMI patients and for 52% of the 976 AMIS STEMI patients. For 1592 GRACE STEMI patients undergoing PCI, median door-to-balloon time was 110 min (IQR 75-169min) versus 80 min (IQR 30-195) in 6643 AMIS STEMI patients; 39% of GRACE patients and 55% of AMIS patients underwent PCI within 90 minutes of hospital presentation. The rate of complications was less in AMIS patients than those in GRACE (recurrent ischemic episodes 5.8% vs. 20%, reinfarction in STEMI patients 1.8% vs. 12%) and in-hospital mortality of STEMI patients was similar (6.2% vs. 6.9%).
Conclusion: AMIS and GRACE both aim to improve the quality of care for ACS patients by describing patients' characteristics, treatment and outcomes. Differences between ACS patients enrolled in the World or Swiss registries should be taken into account when identifying specific care gaps to enhance quality improvement.

Kardiovaskuläre Medizin 2010;13(5): Suppl 18: 53S