BACKGROUND: Prolonged dual antiplatelet therapy (DAPT) after coronary stent implantation is associated with higher risk for bleeding. Second-generation drug-eluting stents (G2-DES), cobalt-chromium everolimus-eluting stent (CoCr-EES) in particular, are reported to have lower risk for stent thrombosis (ST) compared with first-generation DES or bare-metal stents. Therefore, the optimal DAPT duration after CoCr-EES implantation could be shorter than 6-12 months currently recommended in the guidelines. However, there has been no prospective study evaluating DAPT duration shorter than 6 months after CoCr-EES implantation.

METHODS: STOPDAPT study is a prospective multicenter single-arm registry enrolling patients who agreed to follow the 3-month DAPT protocol (discontinuation of clopidogrel at 2- to 4-month and aspirin monotherapy thereafter) after successful CoCr-EES implantation. The primary endpoint was a composite of cardiovascular (CV) death, myocardial infarction (MI), stroke, definite ST and TIMI major/minor bleeding at 1-year. As a historical comparison group, we selected the CoCr-EES group in the RESET trial comparing CoCr-EES with sirolimus-eluting stent conducted in 2010, where nearly 90% of patients had continued DAPT at 1-year. With the 6.6% of performance goal based on the event rate of 4.4% in the RESET trial, a total of 1500 patients would yield 95% power at a level of one-sided type 1 error of 0.025.

RESULTS: Between September 2012 and October 2013, a total of 1525 patients were enrolled in the study from 58 participating centers across Japan, and 1-year follow-up was completed in 1519 patients (99.6%). Thienopyridine was discontinued within 4-month in 1444 patients (94.7%). The event rates beyond 3-month were very low (CV death: 0.64 (95%CI 0.42-0.95), P = 0.03). Cumulative incidence of the primary endpoint was 2.8% (Upper 97.5% confidence interval [CI] 3.6%), which was lower than the pre-defined performance goal of 6.6% (P = 0.0001). Compared to CoCr-EES group in the RESET trial, cumulative incidence of the primary endpoint tended to be lower in the STOPDAPT than in the RESET (2.8% versus 4.0%, P < 0.0001). In the STOPDAPT cohort, the event rate of the secondary endpoint was 2.8% (Upper 97.5% CI 3.6%), which do not differ from the pre-defined performance goal of 6.6% (P = 0.0001).

CONCLUSIONS: Stopping DAPT at 3-month after CoCr-EES implantation was at least as safe as the prolonged DAPT regimen adopted in the previous randomized trial.

CATEGORIES CORONARY: Stents: Drug-Eluting

KEYWORDS: Acute myocardial infarction, drug-eluting stent, elderly patients

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New Generation Drug-eluting Stents vs. Bare Metal Stents for Primary Angioplasty in Patients > 75 Years With ST Elevated Myocardial Infarction: The ESTROFA-MI-75 study

Jose M. De la Torre Hernandez,1 Salvatore Brugaletta,2 Joan A. Gomez Hospital,1 Jose A. Baz,1 Armando Pérez de Prado,1 Ramon Lopez Palop,1 Belen Cid,1 Alejandro Diego-Nieto,1 Federico Gimeno,1 Jose Antonio Fernandez Diaz,2 Juan Sanchez,3 Fernando Alfonso,1 Roberto Blanco,1 Javier Botas Rodriguez,1 Javier Navarro Cuartero,1 Jose Moreu,16 Francisco Bosa,17 Fernando Alfonso,12 Roberto Blanco,13 Javier Botas Rodriguez,14 Jose Miguel Vegas,18 Jaime Elizaga,19 Jose A. Linares,20 Felipe Hernandez,21 Antonio L. Arrebola-Moreno,22 Jose Miguel Vegas,18 Jaime Elizaga,19 Jose A. Linares,20 Felipe Hernandez,21 Antonio L. Arrebola-Moreno,22 Jose Miguel Vegas,18 Jaime Elizaga,19 Jose A. Linares,20 Marta Monteagudo,1 Neus Salvatella,2 Alfredo Gomez Jaume,2 Josepau Mauri2

1Hospital Universitario Marqués de Valdecilla, Santander, Spain; 2Clinic Thorax Institute, Barcelona, Spain; 3Hospital de Bellvitge, Barcelona, Catalunya; 4Hospital Meixoeiro, Vigo, Galicia; 5HemoLeon, Fundacion tratamiento de la Insuficiencia Cardiaca, Leon, Leon, Spain; 6Hospital San Juan de Alicante, Alicante, Spain; 7Hospital Universitario de Santiago de Compostela, Santiago de Compostela, Spain; 8Hospital Universitario de Salamanca, Salamanca, Spain; 9Hospital Clínico de Valladolid, Valladolid, Spain; 10Hospital Puerta de Hierro, Majadahonda, Spain; 11Hospital Clínico de Valencia, Valencia, Spain; 12Hospital Universitario de La Princesa, Madrid, Spain; 13Hospital de Cruces, Bilbao, Spain; 14Alcorcon University Hospital, Madrid, Spain; 15Hospital General de Albacete, Albacete, Spain; 16Virgen de la Salud, Toledo, Spain; 17Hospital Clínico de Tenerife, Santa Cruz de Tenerife, Spain; 18Hospital de Cabueñes, Gijón, Spain; 19Gregorio Marañón, Madrid, Spain; 20Lozano Blesa Hospital, Zaragoza, Spain; 21Hospital 12 de Octubre, Madrid, Spain; 22Hospital Universitario Virgen de las Nieves, Granada, Spain; 23Hospital de Salamanca, Salamanca, Spain; 24Hospital Germans Trias i Pujol, Badalona, Spain

BACKGROUND: Primary angioplasty is the best reperfusion treatment in ST elevated myocardial infarction. The prevalence of very elderly patients (> 75 years) undergoing primary angioplasty is progressively increasing as population is ageing. The benefit of the new generation drug-eluting stents over bare metal stents in terms of safety and efficacy is unknown for this important subgroup of patients in this setting.

METHODS: Retrospective consecutive registry conducted in 31 centers in patients > 75 years with ST elevation myocardial infarction under long-term primary angioplasty.

RESULTS: A total of 3,126 pts have been included, 2,132 (68.2%) treated with BMS and 994 (31.8%) treated with new generation DES. After exclusion of patients presenting with cardiogenic shock or requiring cardiac surgery for mechanical complications (14%) a propensity score matching was performed yielding to 580 patients each in 2 comparable groups of 580 patients each in well-balanced baseline clinical or angiographic characteristics. Outcomes at 12 months were: cardiac death and MI 10.2% with BMS and 5.2% with DES (P = 0.01), TLV was 3.8% with BMS and 1.5% with DES (P = 0.04), definite/ probable thrombosis 4.3% with BMS and 2.4% with DES (P = 0.06), definite thrombosis 3.7% with BMS and 1.3% with DES (P = 0.03) and bleeding BARC > 2.0% with BMS and 1.2% with DES (P = 0.3).

CONCLUSIONS: In this registry of patients over 75 years undergoing primary angioplasty, most were treated with BMS. After propensity score matching clinical outcomes were significantly better in those treated with new DES without significant increase in severe bleeding events in follow up.

CATEGORIES CORONARY: Stents: Drug-Eluting

KEYWORDS: Acute myocardial infarction, drug-eluting stent, elderly patients