

<sup>7</sup>Division of Cardiology Careggi Hospital; <sup>8</sup>Unknown, Florence, Italy; <sup>9</sup>Careggi Hospital, Cardiologia I, Florence, Italy; <sup>10</sup>Careggi Hospital, Florence, Italy

**BACKGROUND** Previous studies have shown the superiority of the everolimus-eluting stent (EES) over first generation drug-eluting stent in terms of efficacy and safety in patients treated with percutaneous coronary intervention (PCI). No data exist about the comparison of provisional-stent (PS) versus double crush -stent (CS) technique outcome in patients with distal unprotected left main disease (DULMD) treated with EES.

**METHODS** From the unprotected left main disease (ULMD) Florence PCI Registry consecutive patients with DULMD treated with EES were included in the analysis. Patients treated with PS were compared with patients treated with CS. Endpoints were: six-nine month angiographic in-segment restenosis rate and one-year clinical outcome.

**RESULTS** From 2008 to 2015 n=435 patients with ULMD were treated with EES. Out these 405 (93%) patients had DULMD; 278 (69%) patients were treated with PS while 127 (31%) with CS. Patients treated with PS compared to patients with CS had a higher incidence of acute coronary syndrome as clinical presentation (64% vs 52%; p=.026) and a higher incidence of left ventricular ejection fraction < 40% (36% vs 23%; p=.008), while patients treated with CS compared to PS patients had more frequent diabetes mellitus (35% vs 21%; p=.003) and three vessel coronary artery disease (46% vs 29%; p=.001). There were no differences between PS versus CS group in term of mean age (71 ± 11 vs 70 ± 10 yrs), renal insufficiency (14% vs 13%), Logistic EuroSCORE > 6 (52% vs 48%) and Syntax score > 32 (47% vs 50%). Procedural differences of CS group vs PS group were: stent length implantation (36 ± 11 vs 22 ± 8, p<.001), and IVUS guidance (82% vs 64%, p<.001). Six to nine-month angiographic FU rate was similar in CS group compared to PS group (95% vs 95%) as well as in-segment restenosis rate (7.1% vs 5.8%). Moreover there were no differences in term of one-year clinical outcome between CS and PS patients (cardiac mortality 3.9% vs 4.7%; myocardial infarction 1.6% vs 1.4%; target vessel revascularization 5% vs 6.3%; definite/probable stent thrombosis 0.8% vs 1.1%).

**CONCLUSION** In the EES era a double crush-stent technique is comparable to provisional stent strategy in terms of angiographic and clinical outcome. This data support the use of a double-crush stent technique in diffuse DULMD in term of safety and efficacy.

**CATEGORIES CORONARY:** Stents: Drug-Eluting

### TCT-356

**The use of robotic-assisted PCI for the treatment of patients with ischemic heart disease**



Arif Al Nooryani,<sup>1</sup> Wael Elabbassi,<sup>2</sup> Marija Markovic,<sup>3</sup> Galal Kerfes,<sup>4</sup> amit bhatia,<sup>5</sup> Loai Abudaqa,<sup>6</sup> Nagwa Abdel Rahman,<sup>7</sup> Anoop Mansoor,<sup>8</sup> bassam al abala<sup>9</sup>

<sup>1</sup>Al-Qassimi Hospital, Sharjah, United Arab Emirates; <sup>2</sup>Alas sims hospital, Sharjah, United Arab Emirates; <sup>3</sup>Al Qassimi Hospital, Dubai, United Arab Emirates; <sup>4</sup>The Everett Clinic, Everett, WA; <sup>5</sup>al Qassimi Hospital, sharjah, United Arab Emirates; <sup>6</sup>al Qassimi Hospital, Abu Dhabi, United Arab Emirates; <sup>7</sup>Cosmopolitan Hospital, Thiruvananthapuram, Kerala, India; <sup>8</sup>Medanta Super Speciality Hospital, Indore, Madhya Pradesh, India; <sup>9</sup>Al Qassimi Hospital, sharja, United Arab Emirates

**BACKGROUND** The purpose of this registry was to evaluate the impact of robotic-assisted interventions on PCI outcome in routine daily practice.

**METHODS** Robotic-assisted angioplasty systems have been developed in order to overcome procedural challenges and occupational hazards associated with traditional PCI. We evaluated clinical outcome of 25 patients undergoing a remote-controlled robotic-assisted percutaneous coronary intervention (rPCI) from June 2014 until December 2015.

**RESULTS** A total of 25 patients (mean age 51±8 years, 81% male) were treated with rPCI for stable coronary artery disease (13 pts, 54%) or acute coronary syndrome (12 pts, 46%). Diabetes was present in 46% of pts, and previous myocardial infarction was present in 31% of pts. PCI was performed in 4 pts with single-vessel, 9 pts with two-vessel, and 12 pts with three-vessel CAD. The total number of robotic-assisted treated vessels was 36, and all cases were performed entirely robotically or with minimal manual manipulation. The total number of implanted stents was 46 including bare metal stents in 10 pts (22%), drug-eluting stents in 22 pts (48%), and bioresorbable scaffolds

(including both Absorb and DESolve scaffolds) in 14 pts (30%). One bioresorbable scaffold collapsed and the lesion was treated with a bare metal stent. The robotic-assisted system success rate for rPCI was 100%, and procedural success was achieved in 24 patients (96%), as one patient suffered from haemorrhagic stroke.

**CONCLUSION** The use of robotic-assisted percutaneous coronary intervention is safe and feasible, with high clinical and procedural success rates, even in patients with implantation of more robust bioresorbable scaffolds. These initial results are promising, and future, larger studies may prove to have a significant impact in reducing the occupational risk from excess radiation.

**CATEGORIES IMAGING:** Cath Lab of the Future

### TCT-357

**Impact of Gender and Age on 3-Year Clinical Outcome and Chest Pain of Patients With Coronary Artery Disease Treated With Contemporary Drug-Eluting Stents: A Patient-Level Pooled Analysis**



Marlies Kok,<sup>1</sup> Liefke van der Heijden,<sup>2</sup> Marije Lowik,<sup>3</sup> Paolo Zocca,<sup>4</sup> Carine J.M. Doggen,<sup>5</sup> Peter Danse,<sup>6</sup> Rutger L. Anthonio,<sup>7</sup> Marc Hartmann,<sup>8</sup> Gerard C.M. Linssen,<sup>9</sup> Angela Maas,<sup>10</sup> Roxana Mehran,<sup>11</sup> Clemens von Birgelen<sup>12</sup>

<sup>1</sup>Thoraxcentrum Twente, Enschede, Netherlands; <sup>2</sup>Thoraxcentrum Twente, Enschede, Netherlands; <sup>3</sup>Thoraxcentrum Twente, Enschede, Netherlands; <sup>4</sup>Medisch Spectrum Twente, Enschede, Netherlands; <sup>5</sup>Department Health Technology and Services Research, MIRA, University of Twente, Enschede; <sup>6</sup>Unknown, Arnhem, Netherlands; <sup>7</sup>Treant Zorggroep, location Emmen; <sup>8</sup>Thoraxcentrum Twente, Enschede, Netherlands; <sup>9</sup>Ziekenhuis Groep Twente, Almelo and Hengelo; <sup>10</sup>Radboud University Medical Center, dept cardiology, Nijmegen, Netherlands; <sup>11</sup>Zena and Michael A. Weiner Cardiovascular Institute at Mount Sinai School of Medicine, New York, New York, United States; <sup>12</sup>Thoraxcentrum Twente, Enschede, Netherlands

**BACKGROUND** Women report more often chest pain following percutaneous coronary intervention (PCI), yet little is known about the impact of age on these symptoms. We aimed to assess age and gender-related differences in chest pain following PCI with newer-generation drug-eluting stents (DES).

**METHODS** A patient-level pooled analysis of the TWENTE and DUTCH PEERS randomized trials (NCT01066650; NCT01331707) was performed, in which patients were treated with newer generation permanent polymer DES. The primary endpoint of both studies was target vessel failure (TVF); secondary endpoints included MACE (composite of any death, any myocardial infarction (MI), emergent CABG or target lesion revascularization) and POCE (composite of any death, any MI and any revascularization).

**RESULTS** Clinical follow-up was available in 3,188 patients (99.8%). Women had more risk factors including diabetes (24.2% vs. 17.8%, p<0.001), hypertension (63.6% vs. 1.6%, p<0.001), and positive family history (54.5% vs. 50.1%, p=0.03). Of all 3,018 patients that were still alive at 3-year follow-up, chest pain data was available in 2,782 (92.2%) patients. At 3-year follow-up, 1,122 (40.3%) of these patients were <65 years of age, and 1,660 (59.7%) were ≥65 years. Women <65 years of age reported significantly more chest pain at rest or mild exertion than men of the same age (11.7% vs. 5.9%, p=0.01), multivariate analysis showed that gender was an independent predictor (adjusted OR 1.91 95%-CI:1.1-3.2, p=0.01). In patients ≥65 years, both women and men reported similar levels of chest pain at rest or mild exertion (8.8% and 8.7%, p=0.76); in this subgroup gender did not independently predict chest pain (adjusted OR 1.27 95%-CI:0.8-1.9, p=0.26). Nevertheless, in women and men similar 3-year rates of TVF, MACE, and POCE were found (11.6% vs. 11.3%, p=0.81; 13.6% vs. 12.5%, p=0.43; 18.8% vs. 18.0%, p=0.60, respectively).

**CONCLUSION** While for both genders the incidence of adverse cardiovascular events was low and similar, women <65 years of age showed a significantly higher prevalence of chest pain at rest or mild exertion at 3-year follow-up.

**CATEGORIES OTHER:** Womens Health Issues