

2 was used for classification and movement of flow. Model 2 was trained based on the convolutional neural network. The main focuses were the presence of laminar and turbulent flow before and after PCI.

**RESULTS** The result showed that at baseline, the turbulent flow happened at the mid RCA (100%) during transition from the end of diastole to the beginning of systole. Right after stenting, the reversed flow and collision disappeared in 70%. Approximately 5 weeks later, 90% of patients had laminar flow. The 10% of patients with persistent turbulent flow continued to have chest pain and even ended up with non-ST-segment elevation myocardial infarction.

**CONCLUSION** After PCI, if the laminar flow was restored, the chance of early thrombosis or in-stent restenosis was minimal. Persistent turbulent flow was precursor of adverse events.

**CATEGORIES IMAGING AND PHYSIOLOGY:** Imaging: Intravascular

**LEFT MAIN OR BIFURCATION PCI I**

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**TCT-145**

**Impact of Technique on Provisional Bifurcation Stent Outcomes in the European Bifurcation Club Left Main Coronary Trial**

Sandeep Arunothayaraj,<sup>1</sup> Jens Lassen,<sup>2</sup> Gerald Clesham,<sup>3</sup> Mark Spence,<sup>4</sup> Adrian Banning,<sup>5</sup> Mitchell Lindsay,<sup>6</sup> Evald Christiansen,<sup>7</sup> Mohamed Eged,<sup>8</sup> James Cockburn,<sup>9</sup> Darren Mylotte,<sup>10</sup> Philippe Brunel,<sup>11</sup> Miroslaw Ferenc,<sup>12</sup> Thomas Hovasse,<sup>13</sup> Adrian Wlodarczak,<sup>14</sup> Manuel Pan,<sup>15</sup> Marc Silvestri,<sup>16</sup> Andrejs Erglis,<sup>17</sup> Evgeny Kretov,<sup>18</sup> Alaide Chieffo,<sup>19</sup> Thierry Lefevre,<sup>13</sup> Francesco Burzotta,<sup>20</sup> Olivier Darremont,<sup>21</sup> Goran Stankovic,<sup>22</sup> Marie-Claude Morice,<sup>23</sup> Yves Louvard,<sup>24</sup> David Hildick-Smith<sup>9</sup>



<sup>1</sup>Royal Sussex County Hospital, Brighton, United Kingdom; <sup>2</sup>Odense University Hospital, Odense, Denmark; <sup>3</sup>Essex Cardiothoracic Centre, Basildon, United Kingdom; <sup>4</sup>Department of Cardiology, Belfast Health and Social Care Trust, Belfast, United Kingdom; <sup>5</sup>John Radcliffe Hospital, Oxford, United Kingdom; <sup>6</sup>Golden Jubilee National Hospital, Glasgow, United Kingdom; <sup>7</sup>Aarhus University Hospital, Skejby, Aarhus, Denmark; <sup>8</sup>Freeman Hospital, Newcastle, United Kingdom; <sup>9</sup>Sussex Cardiac Centre, University Hospitals Sussex, Brighton, United Kingdom; <sup>10</sup>University College Hospital, Galway, Ireland; <sup>11</sup>Hopital Privé Dijon Bourgogne, Dijon, France; <sup>12</sup>University Heart Center Freiburg-Bad Krozingen, Bad Krozingen, Germany; <sup>13</sup>Institut Cardiovasculaire Paris Sud, Ramsay Santé, Massy, France; <sup>14</sup>Copper Health Center, Lubin, Poland; <sup>15</sup>Reina Sofia Hospital, Cordoba, Cordoba, Spain; <sup>16</sup>GCS Axiom-Rambot, Marseille, France; <sup>17</sup>Pauls Stradins Clinical University Hospital, Riga, Latvia; <sup>18</sup>Sibirskiy Federal Biomedical Research Center Novosibirsk, Novosibirsk, Russia; <sup>19</sup>San Raffaele Scientific Institute, Milan, Italy; <sup>20</sup>UOC. di Interventistica Cardiologica e Diagnostica Invasiva, Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Università Cattolica del Sacro Cuore, Rome, Italy; <sup>21</sup>Clinique St Augustin, Bordeaux, France; <sup>22</sup>Department of Cardiology, University Clinical Center of Serbia, Belgrade, Serbia; <sup>23</sup>Cardiovascular European Research Center, Paris, France; <sup>24</sup>Institut Hospitalier Jacques Cartier, Guerande, France

**BACKGROUND** The optimal technical factors for provisional left main bifurcation stenting require investigation. We aimed to identify variables influencing procedural outcomes and periprocedural myocardial infarction following provisional left main intervention.

**METHODS** Procedural and outcome data were analyzed in 438 patients from the per-protocol cohort of the European Bifurcation Club Left Main Trial (EBC MAIN).

**RESULTS** Mean age was 71-years and 37.4% presented with acute coronary syndrome. Significant reduction of side vessel TIMI flow occurred after main vessel stent placement in 5% of procedures but was not associated with any periprocedural myocardial infarction. Failure to rewire a jailed vessel was more frequent when side vessel preparation was not performed (7.4% vs 2.1%,  $P = 0.008$ ) and when jailed wires were not used (9.5% vs 2.5%,  $P = 0.004$ ). Use of the proximal optimization technique was associated with less subsequent side vessel intervention (23.3% vs 41.9%,  $P = 0.028$ ). Side vessel stenting in the provisional cohort was predominantly required for dissection, which occurred more often following side vessel preparation (15.3% vs 4.4%,  $P = 0.006$ ). Exclusive use of non-compliant balloons for kissing balloon inflation was associated with reduced need

for side vessel stenting (17.2% vs 35.9%,  $P = 0.003$ ), and a reduced risk of periprocedural myocardial infarction (2.9% vs 7.7%,  $P = 0.026$ ).

**CONCLUSION** Jailed wire use and side vessel preparation are associated with successful jailed vessel rewiring. However, side vessel preparation also correlates with increased side vessel dissection. Use of the proximal optimization technique may reduce the need for additional side vessel intervention, and non-compliant kissing balloon inflation is associated with reduced side vessel stenting and periprocedural myocardial infarction.

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

**TCT-146**

**Left Main Stem Percutaneous Coronary Intervention: Does Onsite Surgical Cover Make a Difference?**

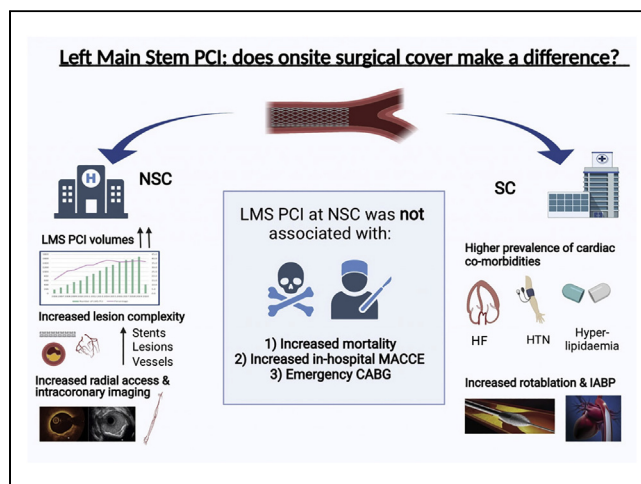


Mahvash Zaman,<sup>1</sup> Muhammad Rashid,<sup>2</sup> Peter Ludman,<sup>3</sup> Nick Curzen,<sup>4</sup> Saadiq Moledina,<sup>5</sup> Cindy Grines,<sup>6</sup> Mamas Mamas<sup>7</sup>  
<sup>1</sup>Manchester Foundation Trust, Manchester, United Kingdom; <sup>2</sup>Keele University, Stoke, United Kingdom; <sup>3</sup>Queen Elizabeth Hospital, Birmingham, United Kingdom; <sup>4</sup>University Hospital Southampton, Southampton, United Kingdom; <sup>5</sup>Keele University, Keele, United Kingdom; <sup>6</sup>Northside Hospital, Atlanta, Georgia, USA; <sup>7</sup>Royal Stoke Hospital, Stoke-On-Trent, United Kingdom

**BACKGROUND** Nonsurgical centres (NSCs) contribute to the significant capacity of overall PCI in the UK. Whilst previous studies have demonstrated similar PCI outcomes in surgical centres (SCs) vs NSCs, it is unknown whether this applies to more complex procedures such as LMS PCI. We compared patient characteristics and outcomes in left main stem (LMS) PCI performed across SCs vs NSCs in England and Wales.

**METHODS** A retrospective analysis of procedures between January 2006 and March 2020 was performed using the British Cardiovascular Intervention Society database and stratified according to the surgical status of the centre. The primary outcomes assessed were in-hospital major adverse cardiovascular and cerebrovascular events (MACCE), all-cause mortality and Bleeding Academic Research Consortium (BARC) stage 3-5 bleeding.

**RESULTS** 40,744 patients underwent LMS PCI during the period, of which 13,922 (34.2%) had their procedure performed at an NSC. The proportion of LMS PCI performed in NSCs increased by more than 2-fold (15.9% in 2006 to 36.7% in 2020). There was no association between surgical cover location and in-hospital mortality (OR 0.92, 95% CI 0.69-1.22), in-hospital MACCE (OR 1.00, 95% CI 0.79- 1.25), or emergency CABG (OR 1.00, 95% CI 0.95-1.06). NSCs had lower BARC 3-5 bleeding complications (OR 0.53, 95% CI 0.34-0.82).



**CONCLUSION** There has been an increase in LMS PCI volumes at NSCs, particularly elective LMS PCI. LMS PCI performed at NSCs was not associated with increased mortality, in-hospital MACCE, or emergency CABG, despite higher disease complexity.

**CATEGORIES CORONARY:** Complex and Higher Risk Procedures for Indicated Patients (CHIP)