**Table 1 Baseline demographics of both study cohorts**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Age <80yrs**  **(n=8901)** | **Age ≥80yrs**  **(n=727)** | **p value** |
| Female (%) | 24.6 | 34.8 | <0.0001 |
| Weight (kg±SD) | 84.2 | 72.5 | <0.0001 |
| BMI (±SD) | 28.9±5.8 | 25.9±4.3 | <0.0001 |
| Diabetes (%) | 18.8 | 15.2 | 0.019 |
| Smoking history (%) | 70.2 | 54.8 | <0.0001 |
| Hypertension history (%) | 62.8 | 71.5 | <0.0001 |
| Chronic kidney disease (%) | 2.8 | 7.9 | <0.0001 |
| Previous CVA (%) | 2.1 | 3.6 | 0.011 |
| History PVD (%) | 3.1 | 5.9 | 0.0003 |
| EF <30% (%) | 6.9 | 12.5 | 0.0004 |
| CCS class (±SD) | 2.72±1.17 | 2.87±1.11 | 0.0003 |
| NYHA class (±SD) | 1.62±0.86 | 1.90±0.96 | <0.0001 |
| Previous MI (%) | 27.8 | 35.8 | <0.0001 |
| Previous CABG (%) | 6.0 | 9.6 | 0.0003 |
| Previous PCI (%) | 20.6 | 21.0 | 0.81 |
| Q wave on ECG (%) | 12.1 | 13.2 | 0.372 |
| ACS presentation (%) | 66.1 | 70.5 | 0.016 |
| Shock (%) | 2.4 | 5.1 | <0.0001 |
| ST depression (%) | 14.3 | 19.6 | 0.003 |

BMI – body mass index; CVA - Cerebrovascular accident; PVD- peripheral vascular disease;

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Age <80yrs**  **(n=8901)** | **Age ≥80yrs**  **(n=727)** | **p value** |
| Age (±SD) | 62.7±10.9 | 84.9±3.9 | <0.0001 |
| Female (%) | 24.6 | 34.8 | <0.0001 |
| ST elevation MI (%) | 23.5 | 34.1 | 0.027 |
| Haemoglobin (g/l, ±SD) | 136.1±15.8 | 123.9±15.7 | <0.0001 |
| WBC count (109/l, ±SD) | 8.9±2.7 | 9.0±3.8 | 0.451 |
| Creatinine (mg/dl, ±SD) | 0.99±0.48 | 1.22±0.98 | 0.0002 |
| Total Mehran score (±SD) | 13.3±7.4 | 24.5±6.8 | <0.0001 |

**Table 2 – Overall and individual components of the modified Mehran**

**bleeding risk score for both study cohorts**

WBC – White blood cell count

**Table 3 Baseline and residual disease severity for both study cohorts**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Age <80yrs**  **(n=8901)** | **Age ≥80yrs**  **(n=727)** | **p value** |
| **Baseline disease severity** | | | |
| Left main stenosis >75% (%) | 3.1 | 9.7 | <0.0001 |
| Proximal LAD stenosis >75% (%) | 35.3 | 47.8 | <0.0001 |
| No. stenosed vessels present (±SD) | 1.46±0.79 | 1.85±0.93 | <0.0001 |
| No. of vessels attempted (±SD) | 1.27±0.53 | 1.32±0.59 | 0.006 |
| No. of lesions attempted (±SD) | 1.63±0.89 | 1.77±0.99 | <0.0001 |
| CTO present (%) | 30.5 | 43.0 | <0.0001 |
| CTO attempted by total procedures (%) | 9.7 | 8.4 | 0.59 |
| Attempt at CTO if present (%) | 26.8 | 18.9 | 0.004 |
| Baseline SYNTAX score (±SD) | 13.1±8.9 | 18.7±11.0 | 0.002 |
| **Residual disease severity** | | | |
| No. of vessels not attempted (±SD) | 0.19±0.12 | 0.53±22 | <0.0001 |
| ≥1 residual untreated vessels (%) | 23.3 | 48.2 | <0.0001 |
| ≥2 residual untreated vessels (%) | 6.5 | 19.5 | <0.0001 |
| ≥3 residual untreated vessels (%) | 1.3 | 4.7 | <0.0001 |
| ≥4 residual untreated vessels (%) | 0.2 | 0.8 | 0.009 |
| All patients with residual CTO (%) | 20.6 | 36.0 | <0.0001 |
| Residual SYNTAX score (±SD) | 1.6±3.3 | 10.1±8.7 | <0.0001 |

LAD – left anterior descending artery; CTO – Chronic total occlusion

**Table 4 – PCI procedural data for both study cohorts**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Age <80yrs**  **(n=8901)** | **Age ≥80yrs**  **(n=727)** | **p value** |
| Femoral access (%) | 9.3 | 16.8 | <0.0001 |
| Left main stem intervention (%) | 3.3 | 9.5 | <0.0001 |
| Bypass graft intervention (%) | 3.7 | 5.4 | 0.034 |
| Proximal LAD intervention (%) | 31.4 | 35.2 | 0.042 |
| Diagnostic device used (%) | 13.0 | 9.8 | 0.011 |
| Atherectomy device used (%) | 3.1 | 9.6 | <0.0001 |
| Aspiration use if PPCI case (%) | 52.1 | 40.1 | 0.004 |
| IABP use if shock present (%) | 20.3 | 18.2 | 0.843 |
| Stent used (%) | 93.9 | 94.5 | 0.567 |
| Largest balloon used (mm, ±SD) | 3.36±0.59 | 3.40±1.71 | 0.061 |
| Longest stent (mm, ±SD) | 23.2±8.2 | 22.1±8.2 | 0.0002 |
| No. stents per case (±SD) | 1.74±1.17 | 1.87±1.25 | 0.001 |
| BMS usage (%) | 19.9 | 34.5 | <0.001 |
| No. DES used per case (±SD) | 1.37±1.24 | 1.24±1.33 | 0.003 |
| No. DES used if DES used (±SD) | 1.85±1.09 | 1.98±1.17 | 0.005 |
| No. BMS uses if BMS used (±SD) | 1.43±0.89 | 1.65±1.01 | 0.0003 |
| Glycoprotein inhibitor used (%) | 14.0 | 8.5 | <0.0001 |
| TIMI flow <3 at procedure end (%) | 3.7 | 4.3 | 0.492 |
| Procedural complication (%) | 3.5 | 3.5 | 1.0 |

LAD – Left anterior descending artery; BMS - Bare metal stent; DES - Drug-eluting stent

**Table 5 – Clinical endpoints for both study groups**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Age <80yrs**  **(n=8901)** | **Age ≥80yrs**  **(n=727)** | **p value** |
| Definite stent thrombosis (%) | 2.1 | 3.3 | 0.017 |
| Clinical ISRS PCI (%) | 2.6 | 3.7 | 0.036 |
| Repeat target vessel PCI (%) | 4.7 | 7.0 | 0.003 |
| Non-TVR PCI (%) | 12.7 | 8.1 | 0.0002 |
| 30-day mortality | 1.9 | 6.6 | <0.0001 |
| 12-month mortality | 4.2 | 12.8 | <0.0001 |

ISRS - In-stent restenosis; Non-TVR- non-target vessel revascularisation

**Table 6 Univariate associates for mortality in patients >80years**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Alive**  **(n=591)** | **Dead**  **(n=102)** | **P value** |
| Age ±SD (years) | 83.5±3.5 | 84.8±3.9 | <0.001 |
| ACS presentation (%) | 68.8 | 80.0 | <0.01 |
| Shock (%) | 2.8 | 202 | <0.001 |
| Previous MI (%) | 34.8 | 42.7 | 0.076 |
| Diabetes (%) | 13.8 | 22.5 | <0.001 |
| EF <30% | 9.6 | 30.1 | <0.001 |
| History of CVA (%) | 3.0 | 6.7 | 0.039 |
| History of PVD (%) | 5.5 | 10.1 | 0.047 |
| CKD (%) | 7.4 | 14.1 | 0.018 |
| BMS use (%) | 32.8 | 49.3 | 0.008 |
| Residual disease (%) | 48.2 | 48.8 | 0.910 |
| No. residual vessels ±SD | 0.72±0.89 | 0.81±1.01 | 0.192 |

CVA - Cerebrovascular accident; PVD- peripheral vascular disease; CKD – Chronic kidney disease; Bare metal stent

**Table 7 Binary logistic regression for mortality in patients >80years**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | All patients  (OR (95% CI)) | P | No shock  (OR (95% CI)) | P |
| Age\* | 1.11  (1.03-1.18) | 0.004 | 1.09  (1.01-1.17) | 0.037 |
| EF<30% | 4.55  (2.41-10.0) | <0.001 | 4.2  (2.21-8.81) | 0.002 |
| Shock | 8.91  (4.11-19.29) | <0.001 | - | - |
| Diabetes | 2.22  (1.23-4.01) | 0.008 | 2.16  (1.15-4.07) | 0.016 |
| Residual disease | - | NS | - | NS |
| No. residual vessels | - | NS | - | NS |
| BMS use | - | NS | 1.69  (1.00-2.12) | 0.05 |