Supplementary Online Content


**eFigure.** CONSORT Diagram

**eTable.** Results of Propensity Score and Multivariate Modeling

This supplementary material has been provided by the authors to give readers additional information about their work.
**eFigure 1. consort diagram**

3,602 STEMI Patients Randomized

- 1,800 Randomized to receive Bivalirudin Monotherapy
  - 324 with no Stent Implantation (Medical Therapy, CABG, Deferred PCI, PTCA Alone)
  - 185 Bivalirudin Infusion Continued After PCI Completed
  - 5 Missing Procedure Time
- 1,802 Randomized to receive Heparin plus GP IIb/IIIa inhibitor
  - 379 with no Stent Implantation (Medical Therapy, CABG, Deferred PCI, PTCA Alone)
  - 11 Missing Procedure Time

1,286 available for analysis
- Shorter Procedure (n=333)
  - Procedure Time 38 [32-42] min*
- Longer Procedures (n=953)
  - Procedure Time 68 [56-85] min*

1,412 available for analysis
- Shorter Procedure (n=370)
  - Procedure Time 39 [34-42] min*
- Longer Procedures (n=1,042)
  - Procedure Time 68 [56-85] min*

*Values represent median [Interquartile Range]
**eTable.** Results of Propensity Score* and Multivariate Modeling

<table>
<thead>
<tr>
<th></th>
<th><strong>Bivalirudin</strong></th>
<th><strong>Heparin+GPI</strong></th>
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<tbody>
<tr>
<td>Odds of AST for short procedure (&lt;45 minute) vs. long (&gt;45 minute) procedure</td>
<td>(OR 4.12, 95%CI [1.18, 14.30]; p=0.03)</td>
<td>(OR 0.00, 95%CI [0.00, 1]; p=1.0)</td>
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<tr>
<td>Odds of AST associated with each 10 min decrease in procedure time#</td>
<td>(OR 1.60, 95%CI [1.12, 2.28]; p=0.009)</td>
<td>(OR 0.79 95%CI [0.56, 1.12]; p=0.18)</td>
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*Propensity score modeling to predict the probability of having a short procedure (<45 min) used the following covariates: age, gender, diabetes, hypertension, hyperlipidemia, heart failure, creatinine clearance <60 cc/min, peripheral vascular disease, anemia, platelet count, prior MI, prior CABG surgery, clopidogrel loading dose 600 mg vs. 300 mg, non-protocol pre-procedure heparin, prior PCI, pre-PCI TIMI flow, total lesion length, prior aspirin use, prior thienopyridine use, total implanted stent length, and symptom onset-to-balloon time.

#Interaction p-value for procedure duration and randomization to bivalirudin or heparin+GPI was 0.005 indicating association of procedure duration and AST was present in bivalirudin patients but not heparin+GPI patients. AST= Definite Acute Stent Thrombosis; CABG= Coronary Artery Bypass Graft Surgery; OR=Odds Ratio; PCI = Percutaneous Coronary Intervention; TIMI= Thrombolysis In Myocardial Infarction; GPI=Glycoprotein IIb/IIIa Receptor Antagonist