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## **The Impact of PRAMI Trial on Interventional Practice in ST-Segment Elevation Myocardial Infarction in a University Hospital**

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### **Background:**

Randomized-control trials, notably PRAMI, demonstrated that immediate percutaneous coronary intervention (PCI) in significantly stenosed, non-infarct vessels in ST elevation MI (STEMI) patients reduces adverse outcomes. However, the impact on clinical practice is unknown.

### **Aim**

To investigate if the number of immediate non-infarct PCIs has changed after publication of PRAMI, and the impact on mortality.

### **Methods:**

STEMI patients with multivessel disease (>50% stenosis) presenting 1 year before and 1 year after PRAMI were included. Exclusion criteria was equivalent to PRAMI. Patients were divided into immediate PCI or staged PCI group (within 12 weeks). Data was analysed using SPSS Statistics® Version 22.

### **Results:**

1472 STEMI patients were analysed. 426 had multivessel disease with 202 in Pre-PRAMI group and 224 in Post-PRAMI group. Of these 19 patients (9.4%) had immediate angioplasty in the Pre-PRAMI group, compared to 28 (12.5%) in the Post-PRAMI group (Odds Ratio 1.37, 95% CI, 0.74-2.54,  $p=0.309$ ). In the Pre-PRAMI group, 21 patients (10.4%) had staged PCI compared to 30 (13.4%) in the post-PRAMI group, Odds Ratio (1.33, 95% CI, 0.74-2.41).

Pre-PRAMI, 16% of patients who had immediate PCI died over a mean of 27 months. The 30 day, 6 month and 1 year mortality was 5%, 10% and 10% respectively. Post-PRAMI, 14% of patients who had immediate PCI died over a mean of 15 months. The 30 day, 6 month and 1 year mortality was 11%, 11% and 14 % respectively.

In those who had staged PCI no deaths were seen either before or after PRAMI publication. Overall, immediate PCI (15%) was associated with significantly higher mortality than staged PCI cohort (0%) (Log rank test  $p=0.005$ ).

### **Conclusions:**

1 year after publication, our center demonstrated a trend to increased immediate PCI to non-infarct vessel, but not the widespread adoption of routine multi vessel PPCI suggested by PRAMI. Immediate PCI of non-culprit vessels was associated with increased mortality, which likely reflects the higher underlying risk of cases judged to require multi vessel PCI, however increased early hazard cannot be discounted. Further larger randomized controlled trials are needed before immediate multivessel PCI is routinely practiced.