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**CLINICAL STUDY OF UTILISATION OF THROMBUS ASPIRATION CATHETERS IN PATIENTS WITH RECOVERING FROM ACUTE MYOCARDIAL INFARCTION UNDERWENT ELECTIVE PERCUTANEOUS**

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**Objective** To observe the safety and efficiency of utilisation of ZEEK thrombus aspiration catheters in patients who recovering from acute myocardial infarction (AMI) underwent elective percutaneous coronary intervention (PCI).

**Methods** From July 2007 to December 2009, 61 patients with recovering from AMI (41 males, mean age of 59.27±10.56 years) were randomly received utilisation of ZEEK thrombus aspiration catheter (aspiration group, n=31) or routine PCI (non-aspiration group, n=30). Clinical and angiographic features between the two groups were analysed.

**Results** Baseline clinical features were similar between the two groups. TIMI 3 flow rate (93.55% vs 56.67%,  $p=0.001$ ) immediately after PCI was significantly higher in aspiration group than that in non-aspiration group. Slow flow (TIMI 2 flow) rate (6.45% vs 26.66%,  $p=0.013$ ), no-reflow (TIMI 0–1flow) rate (0 vs 16.67%,  $p=0.024$ ), and corrected TIMI frames ( $27.94-5.80$  vs  $39.20\pm 5.33$ ,  $p=0.000$ ) immediately after PCI were significantly lower in aspiration group than that in non-aspiration group. Left ventricular ejection fraction (LVEF) ( $56.48\pm 9.77\%$  vs  $47.10\pm 9.24\%$ ,  $p=0.000$ ), the rate of E peak/A peak $<1$  (16.13% vs 46.67%,  $p=0.017$ ) and left ventricular end-diastolic diameter (LVEDD) (cm) ( $5.05\pm 0.39$  vs  $5.92\pm 0.47$ ,  $p=0.000$ ) at 1 week after PCI were statistically significant between the two groups. However, during early follow-up, there were no major adverse cardiac events (MACE) in the two groups.

**Conclusions** Utilisation of ZEEK thrombus aspiration catheters in patients with recovering from AMI is safe and effective, the thrombus aspiration catheters can effectively remove coronary thrombus, improve myocardial tissue perfusion, and can improve postoperative cardiac function, without increasing major adverse cardiac events.