Risk Profile and Impact of Pharmacological Thromboprophylaxis on Bleeding Event and Outcome: Insights from a Contemporary STEMI Prospective Registry.

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BACKGROUND: Recent guidelines recommend a risk stratification tool (Padua score) to guide use of pharmacological thromboprophylaxis (PT) in medical patients. Before the revascularization era, STEMI was recognized as a high-risk factor for venous thromboembolism (VT). However, contemporary treatment including early ambulation and potent dual antiplatelet therapy (DAPT) may have lowered this risk. The aim of this study was to assess the thromboembolic risk of modern-day STEMI patients and whether PT use would impact VT and bleeding event rates.

METHODS: Consecutive patients treated with primary percutaneous coronary intervention (PPCI) in our institution between January 2012 and December 2013 were studied (N=650). An indication for anticoagulation was the only exclusion criteria. Clinical and procedural characteristics were recorded prospectively and entered in a database. Padua score, PT status and VT at 90 days were collected retrospectively from medical charts. Appropriate use of PT in low and high-risk Padua score was evaluated. Bleeding events, VT and ischemic outcomes were compared between patients who received PT and those who did not.

RESULTS: A total of 501 STEMI patients were analysed. Baseline characteristics were different (Table). Overall, no VT occurred at 90 days in both groups. Characteristics such as: age > 70 (27%), cardiac or renal failure (27%) and obesity (21%) were more prevalent Padua risk factors. Most patients (89.6%) were at low risk for VT (Padua score <4). PT was used inappropriately in 48.9% of patients according to the Padua score: 50.6% received PT in the low-risk group and 34.6% did not receive PT in the high-risk group. PT significantly increased the risk of ACUITY bleeding. Other outcomes were similar between groups.

CONCLUSION: This study revealed that VT is rare in STEMI patients treated with PPCI and DAPT. PT was associated with an increased rate of ACUITY bleeding. According to these results, PT should not be routinely used in STEMI patients.

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