

**COMPARISON OF VERAPAMIL VERSUS HEPARIN THERAPY ON PROCEDURAL SUCCESS DURING TRANSRADIAL CORONARY PROCEDURES (VERMUT STUDY)**

Moderated Poster Contributions

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Background: Transradial approach (TRA) for cardiac catheterization is increasingly worldwide. Current guidelines suggest the administration of local anticoagulant (heparin) to reduce radial artery occlusion (RAO), eventually associated with local vasodilator (verapamil) to minimize radial artery spasm (RAS). Nevertheless, this strategy has not been tested in the current era characterized by new materials and patent haemostasis. The aim of our study is to demonstrate that, in the current daily clinical practice, verapamil is superior to heparin in the reduction of a combined endpoint including RAO, RAS and access site complication.

Methods: This is a prospective, single-center, double-blind randomized trial (NCT02454491). Consecutive patients undergoing transradial catheterization are randomized 1:1 to receive intra-radial administration of verapamil (5 mg) or heparin (5000 UI) after a 6F sheath insertion. The primary outcome is the 24-hour occurrence of RAO (ultrasound confirmation), access site complication (grade I-V, from local superficial haematoma to compartmental syndrome) and RAS requiring the bailout administration of vasodilators.

Results: A total of 418 patients are randomized to study treatments. No differences regarding baseline characteristics, procedural details and radial artery measures are observed. Overall, 312 (75%) patients received percutaneous coronary intervention. The combined primary outcome occurs in 127 (30%) patients. It is significantly lower in patients randomized to verapamil as compared to others (26% vs. 35%, $p=0.03$, respectively). This is mainly due a significant reduction in RAS (3.5% vs. 10.5%, $p=0.006$). On the contrary, access site complication and RAO does not differ (9.5% vs. 12%, $p=0.5$ and 18% vs. 17%, $p=0.8$). Similarly, 30-day occurrence of RAO does not differ between groups (10.5% vs. 8.5%, $p=0.6$).

Conclusions: In a daily clinical practice applying systematically modern materials and patent haemostasis technique, local administration of verapamil is superior to heparin to minimize the occurrence of RAO, RAS and access site complications.