

# BENEFIT OF PRESSURE-CONTROLLED HAEMOSTASIS FOR TRANS-RADIAL VASCULAR ACCESS

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**Background:** Trans-radial vascular access (TRA) is widely used due to its advantages such as easy haemostasis and short bed rest time. Therefore, several haemostatic devices have been introduced for TRA. However, pain caused by haemostatic compression has not yet been resolved.

**Objectives:** To determine the optimal compression pressure to minimize pain at a haemostatic site without increasing incidence of other complications after TRA procedure.

**Methods & Results:** A total of 86 patients undergoing trans-radial catheterization from November 2014 to March 2015 were prospectively enrolled in this study, including 42 patients who had their radial arteries compressed by adjusting air volume to reach systolic blood pressure plus 20 mmHg (Group I) and 44 patients who were treated with "conventional haemostasis" by injecting a fixed volume (15 ml) of air into the air bag of TR Band (Group II). Complications such as pain, re-bleeding, hematoma, and radial artery occlusion (RAO) were compared between the two groups. Pain level at the haemostatic site was assessed using a visual analog scale (VAS). Results showed that VAS of Group I was significantly lower than that of Group II ( $1.548 \pm 1.549$  vs.  $2.466 \pm 1.682$  at application;  $1.202 \pm 1.700$  vs.  $2.818 \pm 2.060$  at removal; both  $p < 0.05$ ). Other complications such as re-bleeding, hematoma, and RAO showed no significant differences between the two groups.

**Conclusion:** Pressure-controlled haemostasis with systolic blood pressure plus 20 mmHg can significantly reduce pain at the haemostasis site after TRA procedure without increasing other complications compared to conventional haemostasis.

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