

Radial arteriograms were taken 1 min and 2 min after injection of vasodilators. The RAS incidence was compared at baseline, 1 min and 2 min after injection of vasodilators by one-way ANOVA in three groups. Stenosis of radial arteries in diameter was measured by quantitative computed analysis (QCA) method on radial arteriograms, RAS was defined as stenosis  $>70\%$ , and clinical RAS was defined as patients' feeling of pain or there was obvious resistance in advancing or withdrawing catheters.

**Results** The total RAS rate was 10.6%, and clinical RAS rate 6.2%. Diameter of radial artery, sheath profile and previous TRI history  $>2$  were RAS independent risk factors. The RAS rate at baseline in nitroglycerin group, nicardipine group and cocktail group was 15%, 8.3% and 8.3% (no significant difference), 3.3%, 5.0% and 1.7% (no significant difference) at 1 min after injection of vasodilators, 1.7% (vs Nicardipine group,  $p<0.05$ ), 3.3% and 0%. (vs other two groups, both  $p<0.05$ ) at 2 min after injection.

**Conclusions** RAS rate was 10.6%. The independent relative factors of RAS included diameter of radial artery, sheath profile and  $\geq 2$  previous TRI history. Nitroglycerin and Nicardipine can significantly dilate radial arteries, but the combination of both has a more powerful effect.

GW23-e0664

#### ANALYSIS OF RADIAL ARTERY SPASM AND VASODILATOR INTERVENTION STUDY

doi:10.1136/heartjnl-2012-302920j.15

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**Objectives** The aim of the study was to observe the correlative factors of radial artery spasm (RAS), compare the effect of different spasmolytic regimens on RAS by radial artery angiography.

**Methods** One hundred and eighty patients (97 males and 83 females) undergoing transradial coronary angiography or intervention at our center were divided into three groups: nitroglycerin group (60 patients), nicardipine group (60 patients) and cocktail group (60 patients) randomly. The radial arteriography was performed through the sheath at baseline. Then nitroglycerin 200  $\mu\text{g}$ , nicardipine 200  $\mu\text{g}$  and 100  $\mu\text{g}$  of nicardipine plus 100  $\mu\text{g}$  of nitroglycerin were injected respectively through the right radial arteries.