**TRANSRADIAL CATHETERIZATION AND M-SIGN**

**G.H. Abusaid**, W.I. Khalife

University of Texas Medical Branch, Galveston, TX, USA

Objective: Evaluate the role of subclavian artery (ScA) tortuosity on procedural outcomes during right transradial catheterization (TRC).

Background: TRC is gaining popularity worldwide. It provides more patient comfort, earlier ambulation, shorter hospital stay and lower vascular complications compared to transfemoral-approach but higher rates of access-crossover. We examined whether right ScA tortuosity resembling letter M on fluoroscopy (M-sign, Figure1) is associated with worse procedural outcomes.

Methods: 138 consecutive patients who underwent TRC from March-2011 to March-2012 were retrospectively enrolled. TRC was performed by single-experienced operator assisted by fellows at our high-volume medical center. 44 patients were excluded: 24 did not meet inclusion criteria, 15 had left TRC, 4 had radial anatomical variation precluding access and one had access failure.

Results: M-sign prevalence was 23.7%. Out of 94 patients, 28 had M-sign and 66 did not. M-sign patients were predominantly older males (mean age 62) in contrast to those without M-sign who were younger males (mean age 56); P>0.05. Hypertension, hyperlipidemia, obesity and smoking were highly prevalent in both patient cohorts. Radial artery diameter was ~2.5 mm in both groups. M-sign patients had difficult coronary artery cannulation (21/28) and higher rates of crossover (7/28) compared to no M-sign group (9/66 and 0/66 respectively, P<0.05). M-sign group had more contrast use (108.8+/-32.6 ml), fluoroscopy time (19.2+/-8.6 minutes) and radiation exposure (2000.7+/-646.8 mGy/s) compared to no M-sign group (76.1+/-20.0 ml, 8.3+/-4.7 minutes and 1106.7+/-607.8 mGy/s respectively; P<0.05).

Conclusion: M-sign, when present during right TRC, was associated with more contrast media use, radiation exposure and access-crossover.

