MANUAL HEATING OF RADIAL ARTERY (BALBAY MANEUVER) TO FACILITATE RADIAL PUNCTURE PRIOR TO TRANSRADIAL CORONARY CATHETERIZATION

Sefa Ünal / Burak Açı̇r / Çağrı Yayla / Ahmet Göktuğ Ertem / Yücel Balbay
Türkiye Yüksek İhtisas Education and Research Hospital, Cardiology Department, Ankara, Turkey

BACKGROUND
Transradial access (TRA) is increasingly being used for both diagnostic and interventional cardiac procedures. The use of TRA offers many advantages: decreased bleeding, vascular complications, reduced length of hospital stay, and reduced cost. However, the small size of the radial artery limits the size of the equipment that can be used via this approach.

OBJECTIVE
In this study we sought to investigate whether pre-procedural manual heating of radial artery facilitates radial artery puncture or not.

METHODS
Patients undergoing transradial cardiac catheterization were randomized in a double-blind fashion to a subcutaneous combination of nitroglycerin+diltiazem or manual heating. The study endpoint was puncture score (score 1: easiest puncture-first try, score 2: puncture at second try, score 3: puncture at third try, score 4: puncture at forth or more try, score 5: radial puncture failed).

RESULTS
90 patients were enrolled (45 allocated to treatment group and 45 to heating group). Patients underwent ultrasound of the radial artery before the catheterization. Complications were rare: one hematoma (treatment group) and one radial artery occlusion (heating group). Baseline demographic and clinical characteristics were similar. The baseline radial artery diameter was similar in both groups. (2.41 ± 0.46 mm in heating group and 2.30 ± 0.48 mm in treatment group. However, puncture score was 1.47 ± 0.9 in heating group and 2.22 ±1.2 in treatment group (p=0.002), respectively.

CONCLUSIONS
Pre-procedural manual heating of radial artery facilitates radial artery puncture in patients undergoing transradial cardiac catheterization.