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Transradial Approach: Another Way to Success

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Transfemoral artery (TFA) approach for cardiac catheterization has traditionally been the standard method, approximately for the last 2 decades. Campeau et al first described the radial approach in 1989. Since then, the transradial approach (TRA) has become increasingly common and nowadays is the preferred technique even in primary percutaneous coronary interventions (PCIs) in several catheterization laboratories throughout Europe.

In our catheterization laboratory, we performed 446 coronary angiographies transradially for the year 2009, including 153 elective and 18 primary PCIs. In everyday practice we use 5or 6 Fr sheaths, depending on the probability of PCI. Occasionally we had to change to 7 Fr and we managed to fit an 8 Fr sheath once for a trifurcation case. Most common reasons for an unsuccessful attempt were artery spasm and anatomical variations of the artery tree from the subclavian to the radial artery. Four patients developed local hematoma which resolved with cold compressions and elevation of the lower part of the hand. The success rate for TRA was 96,3%. Crossover from TRA to TFA was 4,7%.

TRA seems to be a safer, more cost effective method than the traditional TFA approach, having similar efficacy rates for a broad spectrum of acute coronary syndrome cases. Even more, transradial primary PCI has been shown not to prolong door to balloon time and has less access site complications, despite the multiple combinations of antiplatelet and anticoagulant regimens. Furthermore, transradial compared to femoral artery access is associated with fewer bleeding complications, shorter time of hospitalization and quicker mobilization of the patient.

TRA should be considered the preferred access site in the presence of peripheral artery disease, more specifically at the aorto-iliac part of the vessels. High bleeding risk or difficulty to achieve appropriate hemostasis, for example in extreme obesity, are some points of concern, leading to select the transradial approach as a better option. Nevertheless, when performed by experienced operators, it is safe and feasible with undoubtedly a steeper learning curve, a little longer procedure and fluoroscopy time.

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