Feasibility and Safety of 4-F Catheter Coronary Angiography and PCI

Amin Hassan, Nabil Makhoul, Arie Shefer, Mahmod Hammoud, Dawod Sharief, Uri Rosenschein

Cardiology Department, Cath. Lab, Bnai Zion Medical Center- Faculty of Medicine, The Technion, Haifa, Israel

Introduction and Objective:
Recently there is a trend for miniaturization of catheter diameter in diagnostic and interventional procedures, to reduce bleeding and promote early ambulation. In this study we examined the feasibility, safety and utility of 4F catheterization (4F CA)

Methods:
We analyzed retrospectively our experience in 4F CA from 01/2008 till 10/2008.
A 4F approach was chosen in patients with expected low probability of CAD and need of PCI . Patients needing primary PCI or programmed PCI were excluded.

Results:
A total of 302 Patients underwent 4F CA, In 287 (95%) 4F CA was satisfactory.
Only 15 patients (5%) needed upgrading to 5F or 6F catheters to achieve good diagnostic angiographic views, 11 of them had significant CAD-(five had significant LM disease) and were referred to CABG , in five an IAB was inserted.
In 213 patients (70%) the 4F CA was only diagnostic; 134 had normal or non-significant CAD and 79 had 1-3 VD, 38 of them needed CABG and 41 for conservative treatment.
In 74 Patients (25%) PCI was performed, using 6F catheters in 66 pts and recently a 4F sheath-less PCI was performed successfully in 8 patients.
Minor bleeding, local hematomas at puncture site occurred in 5 of the 81 pts with 6F and in non of the 4F group. Major bleeding occurred in 2 pts of each group. No complications in the sheath-less group.

Conclusions:
In this observational study, the 4F CA was feasible, safe, and suitable in the majority of patients .Bleeding complications were reduced and earlier ambulation was achieved. A 4F sheath-less PCI potentially may be used more in the future to reduce bleeding complications of the 6F PCI.