

Transcatheter Closure Of Coronary Artery Fistulas; Single Center Experience In 6 Years Period

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Introduction: Recently, transcatheter closure of CAFs has emerged as an alternative to surgery. We present our experience with CAF's between 2007 and 2013.

Method: 21 patients aged between 2 months - 67 years (median 7 years) underwent to cardiac catheterization. The procedure was performed preferably with retrograde approaches if it is feasible, otherwise antegrade approach was used by establishment an AV loop.

Results: In 21 patients, coronary angiograms demonstrated 23 fistulas arising from right coronary artery (RCA) (10), left anterior descending artery (7), left main coronary artery (3), circumflex artery (CX) (3). They were opening to right ventricle (11), right atrium (7), pulmonary artery (3), superior vena cava (1) and bronchial artery (1) with single (15) and multiple orifices (8). There were 4 fistulas with multiple feeding arteries. In 5 patients, the fistula was no closed since they were very small. In one pt the catheter couldn't be advanced to the distal then the procedure was abandoned. Intervention was successful in 15 of 16 patients and realized with retrograde and antegrade way in 12 and 3, respectively. Complete occlusion was achieved in cath lab in 12 immediate after, in 14 after 24 hours. Only residual shunt was another very small fistula that was left untreated in the same patient. 6 coils, 9 vascular plugs (1, 2 and 4) and 4 duct occluders were used. A patient suddenly died four days later probably due to thrombosis in huge and slow filling coronary arteries since the reciprocal competitive flow after closure. There were huge dilated RCA and CX artery communicating with each other acting as multiple feeding arteries and opening into the RV with an acute angle after short course from the RCA origin. It was closed by a vascular plug just distal to the orifice. Other patients are well without recanalization during the median 25 months of follow-up.

Conclusion: CAF's may present in a great variety in morphology. It is not uncommon to see multiple feeding arteries and especially multiple distal openings. Effective and safe percutaneous transcatheter closure is possible in majority of cases but it is not free of complications.