Percutaneous coronary intervention through transradial vascular access in different anatomies of the aortic arch

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Introduction: In our Laboratory for the catheterization of the heart and coronary arteries greatest number of procedures is performed via transradial vascular access. Anomalies of the origin of supraaortic arteries are more frequently encountered when using right transradial vascular access. Three different types of anomalies of the aorta and its branch vessels are defined in referral to the distance of brachiocephalic trunc and aortic arch itself. The most frequent variant is so called bovine arch, when brachiocephalic trunc debranches into the left and the right common carotid artery as well as into the right subclavian artery. This variant has the prevalence of 7-10% in general population and makes no technical problem during heart catheterization. Aberant right subclavian artery (a. lusoria) is present in general population with the prevalence of 1-2%. In this variant the origin of right subclavian artery is positioned distally to the origin of the left subclavian artery. A. lusoria in this variant runs retroesophageally. Due to this course some of the patients have difficulties with swallowing of the food, while majority of the patients is completely symptom-free. Diagnostic methods for precise definition of aortic arch anomalies, i.e. a. lusoriae are CT and MRI angiography.¹

Case report: We present 75-year-old patient who was admitted to CCU in Dubrovnik General Hospital due to the acute coronary syndrome of inferoposterior localization. Urgent coronary arteriography was performed, and right radial artery was used as vascular access. Due to tortuosity of the artery that fulfilled criteria of a. lusoria there were difficulties in placement of the catheter in orifices of both left and right coronary artery. Standard JL 4.0 5Fr catheter was used for the left coronary artery, and AL1 6Fr catheter was used for right coronary artery. Culprit lesion was thrombotic occlusion of distal segment of the right coronary artery, so primary percutaneous coronary intervention was performed with one DES (4.0x13 mm) implanted in the lesion. On the third day of the treatment MSCT angiography of the aortic arch was performed and diagnosis of a. lusoria variant was confirmed. This variant makes right transradial vascular access challenging but with the proper manipulations with the catheter, coronary intervention can be successfully performed.

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LITERATURE

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