

# Anomalna polazišta koronarnih arterija u akutnom koronarnom sindromu: važnost primjerene kanulacije

## Anomalous origin of culprit coronary artery in acute coronary syndromes: importance of cannulation

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**KLJUČNE RIJEČI:** akutni koronarni sindrom, anomalije, perkutana koronarna intervencija.

**KEYWORDS:** acute coronary syndrome, anomaly, percutaneous coronary intervention.

**CITATION:** *Cardiol Croat.* 2018;13(11-12):390. | <https://doi.org/10.15836/ccar2018.390>

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**Uvod:** Anomalna polazišta koronarnih arterija u akutnom koronarnom sindromu (AKS) ne predstavljaju samo kuriozitet, već su i izazov za primjerenu kanulaciju odgovorne koronarne arterije i uspješnu perkutanu koronarnu intervenciju (PCI) koja će dovesti do konačne stabilizacije bolesnika. Prikazujemo seriju slučajeva tijekom rada Hrvatske mreže primarne PCI u Kliničkoj bolnici Dubrava i iskustva s problemima kanulacije vodećim kateterom u slučaju anomalne koronarne cirkulacije.

**Pacijenti i metode:** Analizirani su podaci o anomalnoj koronarnoj cirkulaciji u bolesnika liječenih zbog AKS tijekom razdoblja od 12 mjeseci i strategije PCI.

**Rezultati:** Od ukupno 346 bolesnika s AKS liječenih primarnom PCI u razdoblju od 12 mjeseci (rujan 2017. do rujan 2018.), anomalno polazište odgovorne koronarne arterije nađeno je u 6 (1,7%) bolesnika. U 3 bolesnika radilo se o polazištu cirkumfleksne arterije iz ušća desne koronarne arterije, 1 bolesnik imao je anomalnu solitarnu koronarnu arteriju koja je polazila iz desnog koronarnog sinusa, 1 bolesnik imao je anomalno polazište desne koronarne arterije iz područja stražnje stijenke aorte iznad lijevog koronarnog sinusa s tijekom arterije između pulmonalne arterije i aorte, a u 1 bolesnika se radilo o visokom atipičnom polazištu debla lijeve koronarne arterije iz područja prednje stijenke aorte iznad lijevog koronarnog sinusa. MPA vodeći kateter pokazao se optimalnim odabirom za potporu intervenciji u svim slučajevima polazišta cirkumfleksne arterije iz ušća desne koronarne arterije, kao i u slučaju solitarne koronarne arterije. U ostala 2 bolesnika uspješno je kanulirana odgovorna koronarna arterija s AL2 vodećim kateterom. U 4/6 slučajeva učinjena je uspješna PCI, 1 bolesnik poslan je na kardiokirurški zahvat, a 1 je liječen konzervativno.

**Zaključak:** Anomalno polazište odgovorne koronarne arterije u AKS, iako vrlo rijetko, može otežati PCI jer standardni vodeći kateteri najčešće ne omogućuju uspješnu kanulaciju i potporu.<sup>1</sup> MPA i AL2 kateteri pokazali su se kao primjeren odabir za većinu slučajeva anomalnog polazišta koronarnih arterija.

**Objective:** Anomalous origin of coronary arteries in acute coronary syndrome (ACS) is not only a curiosity, but represent also a challenge for adequate cannulation of the culprit coronary artery and successful percutaneous coronary intervention (PCI) that will lead to the patient's final stabilization. We present a series of cases within Croatian Primary PCI Network and experience in University Hospital Dubrava with guiding catheter selection in the case of anomalous coronary circulation.

**Patients and Methods:** Data on anomalous coronary circulation in patients treated for ACS over a period of 12 months and PCI strategies were analyzed.

**Results:** Out of 346 patients with ACS treated with PCI between September 2017 and September 2018, the anomalous origin of culprit coronary artery was found in 6 (1.7%) patients. In 3 patients, the circumflex artery originated from the right coronary artery, 1 patient had anomalous solitary coronary artery from the right coronary sinus, 1 patient had an anomalous origin of the right coronary artery in the superior/posterior position above the left coronary sinus with coronary artery passing between the pulmonary artery and the aorta, and in 1 of the patients there was high atypical origin of the left coronary artery in the anterior aortic wall above the left coronary sinus. The MPA catheter showed optimal support to intervention in all cases of circumflex artery originating from the right coronary artery as well as in the case of the solitary coronary artery. In the other 2 patients, AL2 guiding catheter provided optimal cannulation. In 4/6 cases successful PCI was performed, one patient was sent to cardiac surgery, and one was treated conservatively.

**Conclusion:** The anomalous origin of the culprit coronary artery in ACS, albeit very rare, can make PCI difficult or impossible because standard guiding catheters do not usually allow successful cannulation and support<sup>1</sup>. MPA and AL2 catheters proved to be appropriate choice for most cases of anomalous coronary artery origin in our patients.

RECEIVED:  
October 25, 2018

ACCEPTED:  
November 5, 2018



### LITERATURE

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