

# Perkutana koronarna intervencija na bifurkacijskoj leziji kroz aberantnu desnu potključnu arteriju (a. lusoria)

## Percutaneous coronary intervention on bifurcation lesion through aberant right subclavian artery (a. lusoria)

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**KLJUČNE RIJEČI:** aberantna desna potključna arterija, a. lusoria, perkutana koronarna intervencija, bifurkacijska lezija, culotte tehnika.

**KEYWORDS:** aberant right subclavian artery, a. lusoria, percutaneous coronary intervention, bifurcation lesion, culotte technique.

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**Uvod:** Aberantna desna potključna arterija (ADPA, a. lusoria) je jedna od najčešćih kongenitalnih anomalija luka aorte sa prevalencijom 1-2%. Radi se o aberantnom polazištu desne potključne arterije koja polazi sa luka aorte najčešće kao najdistalniji ogranak i ima svoj aberantni tijek u medijastinumu, najčešće je iza jednjaka.<sup>1</sup>

**Prikaz slučaja:** 67-godišnji bolesnik s anamnezom dugogodišnje šećerne bolesti i arterijske hipertenzije hospitaliziran je radi elektivne koronarografije. Bolesniku su ranije implantirana dva stenta u desnu koronarnu arteriju tijekom liječenja akutnog infarkta miokarda lijevim transradijalnim pristupom. Bolesnik je naručen na novu hospitalizaciju radi intervencije na pravoj bifurkacijskoj leziji LAD/D1 (Medina 1,1,1) desnim transradijalnim pristupom koristeći 6Fr uvodnicu prilikom koje je bio otežan pristup u ascendentni dio aorte zbog čega je učinjena angiografija luka aorte koja je pokazala da je desna arterija subklavija najdistalniji ogranak luka aorte. Procedura je nastavljena uz tehnički zahtjevnije manipulacije vodećim kateterom. Bifurkacijskom “culotte” tehnikom implantirani su stentovi u bifurkacijsku leziju (slika 1). Nalaz ADPA potvrđen je MSCT-om toraksa s iv. kontrastom kojim se prikaže odsutnost trunkusa brahiocefalikus, zajedničko polazište karotidnih arterija, uredno polazište lijeve arterije subklavije te anomalno polazište desne arterije subklavije koja polazi na prijelazu luka u descendentni dio torakalne aorte i nastavlja se iza jednjaka (slika 2).

**Diskusija:** Kongenitalne anomalije luka aorte se najčešće slučajno dijagnosticiraju tijekom obavljanja rutinskih slikovnih pretraga. Razlog vjerojatno leži u činjenici da većina anomalija ne uzrokuje nikakve simptome. Na ADPA tijekom kateterizacije koristeći desni radijalni pristup trebalo bi posumnjati ukoliko žica direktno ulazi iz potključne arterije u descendentnu aortu. Angiografija koronarnih arterija kroz ADPA je otežana i vrlo česta zahtjeva višestruku izmjenu različitih katetera i žica. U literaturi su opisana do sada dva slučaja<sup>1</sup> intervencijskog liječenja kroz ADPA.

**Introduction:** Aberrant right subclavian artery (ARSA, a. lusoria) is one of the most common congenital arch anomalies. The prevalence of ARSA ranges from 1 to 2%. ARSA originates from aortic arch as most distal branch and has its own aberrant pathway in mediastinum, most commonly retroesophageal.<sup>1</sup>

**Case report:** 67-years old male patient with history of arterial hypertension and type II diabetes mellitus was admitted to our hospital for elective coronary angiography. During previous hospital stay coronary angiography using left radial access with implantation of two stents was done due to acute myocardial infarction. Patient was scheduled for another intervention on bifurcation lesion LAD/D1 (Medina 1,1,1). During procedure right radial access with 6Fr guiding catheter was used. The advancement of any catheters into the ascending aorta was difficult, so we performed angiography of aortic root which revealed ARSA. The procedure was continued with some specific manipulation of guide wires and catheters. After reaching a bifurcation lesion, stents were implanted using “culotte” stenting technique (Figure 1). Postprocedural CT angiography was done to confirm ARSA. Exam showed absence of truncus brachiocephalicus, with common carotid ostium, regular position of left subclavian artery and anomalous ostium of right subclavian artery as most distal branch on aortic root which passes behind the oesophagus (Figure 2).

**Discussion:** Congenital arch anomaly are mostly diagnosed sporadically during routine radiological scanning. The reason for that is probably the fact that patients are almost always asymptomatic. If there is some difficulties during coronary angiography and guide wires enter directly to the descending aorta when right radial access is used, ARSA should be considered. Interventions in patients with ARSA is complicated and often requires multiple wires and catheters changes. Only two cases<sup>1</sup> of interventional treatment through ARSA was described in the literature.

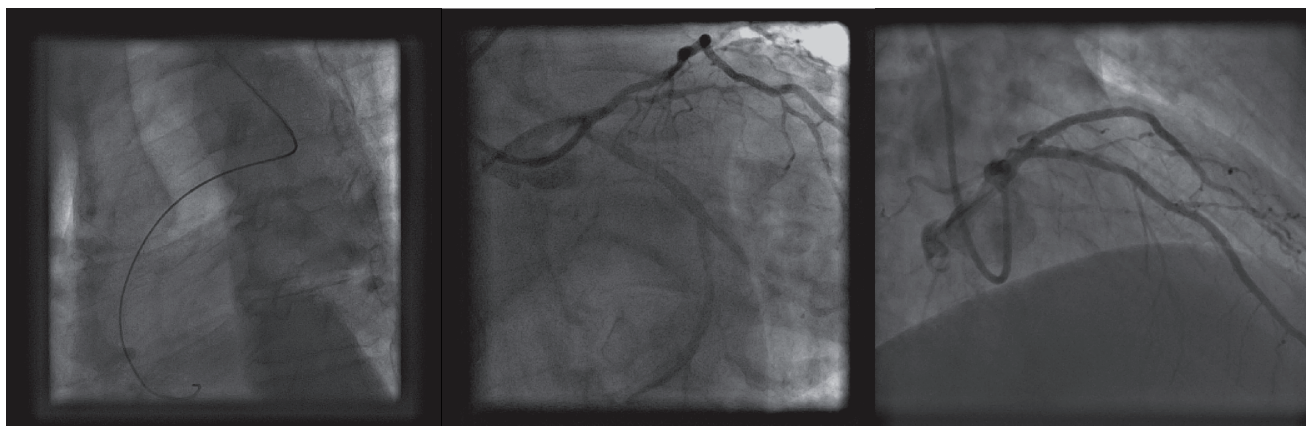
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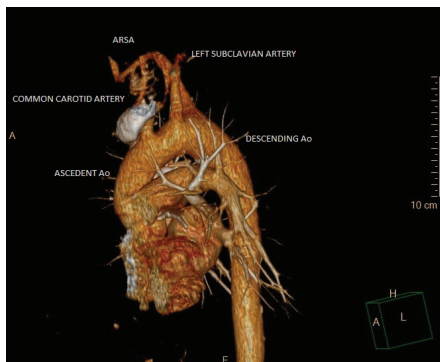


**Zaključak:** Iako je tehnički nešto zahtjevnija intervencija desnim transradijalnim pristupom kod bolesnika s ADPA, mišljenja smo da najčešće nije potrebno mijenjati vaskularni pristup.

**Conclusion:** The existence of ARSA makes coronary angiography more difficult and demanding procedure, but could be done without switching to another vascular access.



**FIGURE 1. Coronary angiography – 1. positioning of guiding catheter; 2. bifurcation stenosis LAD/D1; 3. final result after placement of the stents.**



**FIGURE 2. CT of aortic arch – 3D reconstruction. Abberant right subclavian artery (ARSA) originates form aortic arch as most distal branch.**

#### LITERATURE

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