

Perkutane intervencije u kroničnim okluzijama: iskustva jednog centra s hibridnim pristupom

Percutaneous coronary intervention in chronic total occlusions: single centre experience with hybrid approach

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Uvod: Perkutane koronarne intervencije (PCI) kroničnih okluzija (CTO) koronarnih arterija gotovo su jedino rastuće područje koronarne intervencijske kardiologije, gdje je za uspjeh ključna optimalna indikacija i optimalno poznavanje svih dostupnih tehnika i materijala. Unazad nekoliko godina, hibridni pristup intervencijama u CTO pokazao se kao optimalna strategija s dobrim omjerom uspješnosti i komplikacija.¹ Ovdje prikazujemo iskustva iz Kliničke bolnice Dubrava s uvođenjem hibridnog pristupa PCI u CTO.

Pacijenti i metode: Analizirane su procedure i uspješnost procedura prije i nakon rutinskog usvajanja hibridnog pristupa intervencijama u CTO. Hibridni pristup CTO intervencijama zasniiva se na rutinskoj analizi istovremene bilateralne injekcije kontrasta u svakoj CTO leziji te tek ovisno o angiografskom izgledu proksimalne kape CTO i kvaliteti prikaza kolateralne cirkulacije i prikazu izgleda ciljnog mjesta distalno od okluzije kolateralnom cirkulacijom, ciljanom odabiru jedne od sljedećih strategija: anterogradni prolaz u pravi lumen eskalacijom CTO žica (AWE), anterogradna disekcija i ponovni ulaz u pravi lumen uz pomoć specijalnih katetera i balona ("Crossboss i Stingray") (ADR), retrogradni prolaz u pravi lumen eskalacijom CTO žica (RWE) ili reverzni CART (retrogradna disekcija i ponovni ulaz u pravi lumen).

Rezultati: Nakon procesa usvajanja hibridnog pristupa CTO intervencijama tijekom 2016. broj ponovljenih procedura osjetno je smanjen, a postotak uspješnosti rekanalizacija CTO povećan. U analiziranom periodu nakon potpunog usvajanja hibridnog pristupa od srpnja 2017. do srpnja 2018. indicirane su 52 CTO intervencije, od čega 34 na desnoj koronarnoj arteriji. Učestalost finalnih strategija PCI bile su: AWE 46/52, ADR 2/52, RWE 2/52 i rCART 2/52. Ukupna uspješnost rekanalizacije bila je 84%. Ponovljena procedura bila je indicirana u 4/52 bolesnika. Periproceduralne komplikacije bile su rijetke: 1 srčana tamponada s potrebom kardiokirurške intervencije i 1 ruptura razriješana u angiosali bez potrebe za kardiokirurškom intervencijom. Nije zabilježeno periproceduralnih smrtnih ishoda.

Zaključak: Hibridni pristup PCI u CTO pokazao se kao siguran, učinkovit, pošten i štedljiv način rekanalizacije kroničnih okluzija koronarnih arterija.

Introduction: Percutaneous coronary intervention (PCI) in chronic total occlusions (CTO) is almost the only growing area of coronary interventional cardiology, where the key to success is true indication and knowledge of all available techniques and materials. Recently, the hybrid approach to CTO interventions proved to be an optimal strategy with the best ratio of success and complications.¹ Here, we present experience in University Hospital Dubrava with hybrid PCI approach to CTO.

Patients and Methods: Procedures before and after the routine adoption of a hybrid approach to CTO interventions were analyzed. Hybrid approach to CTO is based on routine dual catheter contrast injection in each CTO lesion indicated for PCI, and only depending on the angiographic assessment of the proximal cap, collateral circulation visualization, and the appearance of the distal target by collateral circulation, one of the following strategies is selected: antegrade CTO wire escalation (AWE), antegrade dissection and re-entry with dedicated materials ("Crossboss and Stingray") (ADR), retrograde CTO wire escalation (RWE), or reverse CART (retrograde dissection and re-entry into true lumen).

Results: After the process of hybrid approach adoption to CTO interventions during 2016, the number of redo procedures in our center decreased considerably, whereas the success rate increased. In the period after the full adoption of the hybrid approach between July 2017 and July 2018, 52 CTO interventions were indicated, of which 34 on the right coronary artery. Proportions of final PCI strategies were: AWE 46/52, ADR 2/52, RWE 2/52, and reverse CART 2/52. Total success rate was 84.6%. Repeated procedure was indicated in 4/52 patients. Periprocedural complications were rare: 1 coronary perforation needing cardiac surgery and 1 coronary perforation treated in Cath lab without need for cardiac surgery. No periprocedural mortality was recorded.

Conclusion: The hybrid approach to CTO PCI proved to be a safe, efficient, and economical method, and should be adopted as a routine approach to CTO intervention.

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LITERATURE

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