Klinički slučajevi u kojima je koronarna angiografija kompjutoriziranom tomografijom omogućila bolju dijagnostičku informaciju u odnosu na invazivnu koronarografiju

Clinical cases in which coronary CT angiography confers superior diagnostic information compared with invasive coronary angiography

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KLJUČNE RIJEČI: koronarografija kompjutoriziranom tomografijom, koronarna bolest srca, koronarna premošnica, aneurizma aorte.

KEYWORDS: coronary computed tomography angiography, coronary artery disease, coronary artery bypass graft, aortic aneurysm.

CITATION: Cardiol Croat. 2014;9(9-10):406.

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UVOD: 64-godišnja žena je upućena na preoperativnu koronarnu CT-angiografiju (Coronary CT Angiography, CCTA) zbog pitanja prohodnosti grafta (RIMA na RCA). 2007. god. je učinjena kombinirana operacija (CABG x1 + AVR) zbog teške aortne regurgitacije i značajne stenozes desne koronarne arterije koja je utvrđena invazivnom koronarografijom. Nedavno je ponovno hospitalizirana zbog protrahirane stenokardije, gdje je ultrazvučno i MSCT aortografijom ustanovljena pseudoaneurizma na prijelazu iz ascendentne aorte u luk te je indiciran operativni zahvat.

REZULTATI: Učinjenom CTAA ustanovili smo: 1) RIMA na RCA je okludirana; 2) RCA ima difuzne aterosklerotske promjene i neznčajnu stenozu u proksimalnom i srednjem segmentu; 3) Mehanička aortna vavula, pseudoaneurizma (na bazi disekcije) na prijelazu ascendentne aorte u luk dužine 5,5 cm.

RASPRAVA: 1) Temeljem nalaza CTAA postavlja se pitanje je li leziju trebalo kirurški revaskulizirati ili učiniti hibridnu operaciju (stentiranje + AVR), s obzirom na to da se nalazi na RCA; 2) Značajna stenozna na RCA moguće je bila posljedica kateterom inducirano spazma, što je komplikacija povezana s ICA, iako se spazam može demaskirati infuzijom nitroglicerina, ponekad može biti pogrešno dijagnosticiran kao koronarna stenozna. 3) Dugotrajna medikamentna terapija je mogla dovesti do regresije značajne lezije u neznčajnu?

ZAKLJUČAK: CCTA osigurava bolju dijagnostičku informaciju u pojedinim kliničkim situacijama kao što su: kompleksne varijacije koronarnih arterija, aorto-ostijalne lezije, praćenje venskih premošnica, miokardijalni bridging, fistule koronarnih arterija, disekcija aorte i koronarnih arterija i slučajevi gdje ušća koronarnih arterija ne mogu biti kanulirana kateterom zbog masivne ateroskleroze ili ekstremno tortuotičnih žila. Također, pomaže u prevenciji lažne dijagnoze značajne stenozes utvrđene ICA, a nastale kao posljedica spazma inducirano kateterom.

INTRODUCTION: A 64-year-old woman was sent on preoperative CTAA with question of graft patency (RIMA on RCA). 2007 she underwent on CABG x 1 + AVR surgery because of severe aortic regurgitation and significant stenosis of RCA determined on ICA. Recently, she was re-hospitalized for prolonged anginal pain where on ultrasound and MSCT aortography verified pseudoaneurysm at the turn of the ascending aorta in the arch and the operative procedure was indicated.

RESULTS: On CTAA we found: 1) RIMA on RCA occluded; 2) RCA has diffuse atherosclerotic changes and insignificant stenosis in proximal and middle segment. 3) Mechanic aortic valve, pseudoaneurysm (based on dissection) at the turn of the ascending aorta in the arch length of 5.5 cm.

DISCUSSION: 1) Based on the findings CTAA raises the question of whether the lesion should be referred to surgical revascularization or to a hybrid operation (stenting plus AVR), as it is on the right coronary artery; 2) Perhaps, significant stenosis on RCA was catheter induced spasm, which is complication associated with CCA, although the spasm can be resolved by nitroglycerine infusion, it can sometimes be erroneously diagnosed as coronary stenosis; 3) Long-term drug therapy has led to a possible regression of significant lesion in insignificant?

CONCLUSION: CCTA provides more valuable diagnostic information in certain clinical situations, such as complex coronary artery variations, aorto-ostial lesions, follow up of bypass grafts, myocardial bridging, coronary artery fistulas, aortic and coronary artery dissections and cases in which the coronary ostia cannot be cannulated by a catheter because of massive atherosclerosis or extremely tortuous vascular structures. Also, it is useful in preventing false diagnosis due to catheter induced spasm in patients who have been diagnosed with an aorto-ostial lesion by CCA.

LITERATURE

1. Kantarci M, Do anay S, Karcaaltincaba M, et al. Clinical situations in which coronary CT angiography confers superior diagnostic information compared with coronary angiography. *Diagn Interv Radiol.* 2012;18(3):261-9.
2. de Araújo Gonçalves P, Campos CA, Serruys PW, Garcia-Garcia HM. Computed tomography angiography for the interventional cardiologist. *Eur Heart J Cardiovasc Imaging.* 2014;15(8):842-54.
3. Hoffman HK, Shi H, Schmid FT, Gelman H, Brambs HJ, Aschoff AJ. Noninvasive coronary imaging with MDCT in comparison to invasive conventional coronary angiography. *Am J Roentgenol.* 2004;182:601-8.
4. Leschka S, Stolzmann P, Desbiolles L, et al. Diagnostic accuracy of high-pitch dual source CT for the assessment of coronary stenoses: first experience. *Eur Radiol.* 2009;19:2896-903.
5. Duran C, Kantarci M, Subasi ID, et al. Remarkable anatomic anomalies of coronary arteries and their clinical importance: a multidetector computed tomography angiographic study. *J Comput Assist Tomogr.* 2006;30:939-48.

RECEIVED:
October 1, 2014