Usporedba karakteristika transradijalnih i transfemoralnih koronarnih intervencija – prva iskustva iz Kliničke bolnice Merkur

Comparison of characteristics during transradial and transfemoral coronary procedures – initial experience from University Hospital Merkur

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KEYWORDS: transradial approach, transfemoral approach, percutaneous coronary intervention.

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UVOD: Transradijalni (TR) pristup u koronarnoj angiografiji/intervenciji pokazuje prednosti u kvaliteti života i kliničkom ishodu pojedinih skupina bolesnika. U Kliničkoj bolnici Merkur TR procedure izvode se sustavnije posljednjih godinu dana. Cilj ispitivanja bio je usporediti uobičajene karakteristike s obzirom na vrstu pristupa koronarnoj angiografiji/intervenciji.

REZULTATI: Od studenoga 2013. do svibnja 2014. godine učinjene su 524 intervencije od čega 202 (39%) TR pristupom, a 322 (61%) transfemoralnim (TF) pristupom. Zbirno su TR intervencije imale kraće vrijeme dijaskopije (TR 2,7 min. vs TF 5,0 min; $p < 0.001$), kraće vrijeme postupka (TR 29,5 min. vs TF 34,6 min; $p = 0.002$) i manju količinu potrošenog kontrasta (TR 88,5 ml vs TF 114,1 ml; $p < 0.001$) u odnosu na TF procedure. Dijagnostičke TR intervencije (174 bolesnika) također su imale kraću dijaskopiju (TR 2,1 vs. TF 4,9 min; $p < 0.001$), kraću vrijeme (TR 26,5 min. vs TF 33,9 min; $p < 0.001$) i manje korištenje kontrasta (TR 79,5 ml vs TF 112,5 ml; $p < 0.001$) u odnosu na dijagnostičke TF procedure (175 bolesnika). Koronarne intervencije TR pristupom (28 bolesnika) imale su dulju dijaskopiju (TR 6,2 vs. TF 5,0 min; $p = 0.04$), duže vrijeme (TR 47,9 min. vs TF 35,9 min; $p = 0.003$) i veću potrošnju kontrasta (TR 167,1 ml vs TF 116,2 ml; $p < 0.001$) u odnosu na TF intervencije (147 bolesnika).

ZAKLJUČAK: Dobiveni rezultati, u dijelu zbirnih rezultata i rezultata dijagnostičkih procedura, samo na prvi su pogled iznenađujući. Oni ipak vjerojatno pokazuju selekcijsku pristranost kod izbora bolesnika za TR pristup. Dijelom se mogu objasniti i manjom učestalošću intervencijskih procedura u TR pristupu. Uočena razlika u intervencijskim procedurama vjerojatniji je odraz stanja u našem laboratoriju čiji je dominantni pristup ipak TF. S obzirom na to da se kompleksne intervencije uglavnom izvode TF, pristup stvarna je razlika vjerojatno i veća. Sveukupno gledano, dobiveni rezultati ipak su očekivani i odraz su uobičajene krivulje učenja.

INTRODUCTION: Transradial (TR) approach for coronary procedures shows benefits in the quality of life and clinical outcomes for some patients. TR procedures are being performed more frequently in University Hospital Merkur in the last 12 months. Aim of this study was to compare usual procedural characteristics of coronary procedures with regards to the vascular approach.

RESULTS: From November 2013 till May 2014 a total of 524 procedures were performed; 202 (39%) via TR and 322 (61%) via transfemoral (TF) approach. Overall results show that TR procedures had shorter fluoroscopy times (TR 2.7 vs TF 5.0 min; $p < 0.001$), shorter procedural times (TR 29.5 vs TF 34.6 min; $p = 0.002$) and lower contrast use (TR 88.5 vs TF 114.1 ml; $p < 0.001$) when compared to overall TF procedures. Diagnostic TR procedures (174 patients) compared to diagnostic TF procedures (175 patients) also had shorter fluoroscopy times (TR 2.1 vs. TF 4.9 min; $p < 0.001$), shorter procedural times (TR 26.5 vs TF 33.9 min; $p < 0.001$) and lower contrast use (TR 79.5 vs TF 112.5 ml; $p < 0.001$). Coronary interventions via TR approach (28 patients) compared to TF interventions (147 patients) had longer fluoroscopy times (TR 6.2 vs. TF 5.0 min; $p = 0.04$), longer procedural times (TR 47.9 vs TF 35.9 min; $p = 0.003$) and higher contrast use (TR 167.1 vs TF 116.2 ml; $p < 0.001$).

CONCLUSION: Although initially surprising, overall results and results of diagnostic procedures can probably be attributed to the selection bias when deciding which patient undergoes TR procedure. Lower number of interventional procedures via TR approach could also influence overall results. Difference observed in interventional procedures probably better reflects the current situation in our catheterization laboratory which is predominantly TF oriented. Actual difference in interventional procedures is probably even bigger given that most of the complex procedures are done via TF route. Altogether acquired results are expected and reflect the usual learning curve.

LITERATURE

1. Jolly SS, Yusuf S, Cairns J, et al; RIVAL trial group. Radial versus femoral access for coronary angiography and intervention in patients with acute coronary syndromes (RIVAL): a randomised, parallel group, multicentre trial. *Lancet*. 2011;377:1409-20.
2. Cooper CJ, El-Shiekh RA, Cohen DJ, et al. Effect of transradial access on quality of life and cost of cardiac catheterization: a randomized comparison. *Am Heart J*. 1999;138:430-6.

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