Abstract number: Euro19A-POS231
Abstract type: Poster
Reference: This abstract was presented at EuroPCR 2019, 20-24 May 2019, Paris
Link: https://abstractbook.pcronline.com/export/pdf/id/130391
Published on: 3 May 2019

Comparison of a radial dedicated Tig Impulse catheter vs. standard catheters during coronary angiography - a prospective, randomised pilot study

STACHOWIAK P. (1), PIATEK P. (1), NOWAK T. (1), OLEDZKI S. (1), GORACY J. (1)
(1) Pomeranian Medical University, Szczecin POLAND

THEME: Coronary Interventions
TOPIC(S): Stable CAD

AIMS

The aim of this pilot study was to assess whether using a radial artery dedicated catheter (Tig Impulse, Boston Scientific Corp.) in a big volume catheterization laboratory where the staff has a great experience with standard catheters (Judkins, Boston Scientific Corp.) is a good idea to reduce fluoroscopy time, radiation dose and contrast volume dose in patients underwent coronary angiography?

METHODS AND RESULTS

A total of 46 patients who underwent coronary angiography were prospectively randomised to either radial artery dedicated catheter (Tig Impulse, 5Fr or 6Fr, Boston Scientific Corp.) versus standard Judkins left and right catheters (5Fr or 6Fr Boston Scientific Corp.). The end points of the study included fluoroscopy time, total radiation dose and total contrast volume used. Physicians with a great experience in coronary angiography have been chosen to conduct the procedures in the study.In the pilot study group 52.4% of patients was in the catheter Tig Impulse subgroup and 47.6% in the Judkins subgroup. Tig Impulse was associated with significant higher fluoroscopy time (297±143 vs 196±254 seconds, p=0.001). Total dose of radiation was also significant higher in Tig Impulse subgroup than in Judkins subgroup and was amounted to 401±207 vs 302±259 mGy, p= 0.017 for Tig Impulse and Judkins subgroup respectively. Moreover total contrast volume was also higher in Tig Impulse subgroup than in Judkins subgroup (76 ± 14 ml vs 64 ± 12 ml, p= 0.023).Patients' comorbidities were not significantly different between both subgroups.A total of 9 patients (47%) were crossed over from Tig Impulse catheter to Judkins catheter because of not enough image quality or difficulty in coronary engagement. No patients have to be switched to femoral access. One patient has an artery spasm (in Judkins subgroup) which prolonged procedure but finished the procedure from radial access. In limitations it should be mentioned that our staff had a small experience in Tig Impulse catheters what might have an influence in the results. It is a pilot study and therefore we are planning a larger research to confirm results which should be also focused on complication rate in larger group.

CONCLUSIONS

In conclusion there is no advantage of Tig Impulse - dedicated radial catheter versus standard catheters in reduction of fluoroscopy time, total dose of radiation and total contrast volume. Moreover, in a very experienced team in applying standard catheters there is a significant difference in favor of Judkins catheters using for radial access.